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## Nucleotide Sequence of First Rhesus HER2/Neu

```
1 ATGGAGCTGG CGGCCTGGTA CCGCTGGGGG CTCCTCCTCG CCCTCTTGCC CCCC GGAGCT
61 GCGGGCACCC AAGTGTGCAC CGGCACAGAC ATGAAGCTGC GGCTCCCTGC CAGTCCCGAG
121 ACCCACCTGG ACATGCTCCG CCACCTCTAC CAGGGCTGCC AGGTGGTGCA GGGTAACCTG
181 GAACTCACCT ACCTGCCCAC CAATGCCAGC CTCTCCTTCC TGCAGGATAT CCAGGAGGTG
241 CAGGGCTACG TGCTCATCGC TCACAACCAA GTGAGGCAGG TCCCACTGCA GAGGCTGCGG
301 ATTGTGCGAG GCACCCAGCT CTTTGAGGAC AACTATGCCC TGGCCGTGCT AGACAATGGA
361 GACCTGCTGA ACAATACCAC CCCTGTCACA GGGGCCTCCC CAGGAGGCCT GCGGGAGCTG
421 CAGCTTCGAA GCCTCACAGA GATCTTGAAA GGAGGGGTCT TGATCCAGCG GAACCCCCAG
481 CTCTGCTACC AGGACACGAT TTTGTGGAAG GACATCTTCC ATAAGAACAA CCAGCTGGCT
541 CTCACACTGA TCGACACCAA CCGCTCTCGG GCCTGCCACC CCTGTTCTCC AGTGTGTAAG
601 GGCTCCCGCT GCTGGGGAGA GAGTTCTGAG GATTGTCAGA GCCTGACGCG CACTGTCTGT
661 GCCGGTGGCT GTGCCCGCTG CAAGGGGCCA CTGCCCACTG ACTGCTGCCA TGAGCAGTGT
721 GCTGCCGGCT GCACGGGCCC CAAGCACTCT GACTGCCTGG CCTGCCTCCA CTTCAACCAC
781 AGCGGCATCT GTGARCTGCA CTGCCCAGCC CTGGTCACCT ACAACACAGA CACCTTTGAG
841 TCCATGCCCC ACCCGAGGGG CCGGTATACA TTCGGCGCCA GCTGTGTGAC TGCCTGTCCC
901 TACAACCTACC TTTCTACGGA CGTGGGATCC TGCACCCTCG TCTGCCCCCT GCACAACCAA
961 GAGGTGACAG CGGAGGACGG AACACAGCGA TGTGAGAAGT GCAGCAAGCC CTGTGCCCGA
1021 GTGTGCTATG GTCTGGGCAT GGAGCACTTG CGAGAGGTGA GGGCGGTGAC CAGTGCCAAT
1081 ATCCAGGAGT TTGCTGGCTG CAAGAAGATC TTTGGGAGCT TGGCATTCTT GCCAGAGAGC
1141 TTTGATGGCG ACCCAGCCTC CAACACCGCC CCGCTTCAGC CGGAGCAGCT CCGAGTGTCT
1201 GAGACTCTGG AAGAGATCAC AGGTTACCTA TACATCTCAG CATGGCCAGA CAGCCTGCCT
1261 GACCTTAGCG TCCTCCAGAA CCTGCAAGTA ATCCGGGGAC GAATTCTGCA CAATGGCGCC
1321 TACTCACTGA CCCTGCAAGG GCTGGGCATC AGCTGGCTGG GGCTGCGCTC GCTGAGGGAA
1381 CTGGGCAGTG GACTGGCCCT CATCCACCAT AACACCGGCC TCTGCTTTGT GCACACGGTG
1441 CCCTGGGACC AGCTCTTCCG GAACCCGCAC CAAGCCCTGC TCCACACTGC CAACCGGCCA
1501 GAGGACGAGT GTGTGGGCGA GGGCCTGGCC TGCCACCAGC TGTGCGCCCG AGGGCACTGC
1561 TGGGGTCCAG GGCCACCCA GTGTGTCAAC TGCAGCCAGT TCCTTCGGGG CCAGGAGTGC
1621 GTGGAGGAAT GCCGAGTACT GCAGGGGCTC CCCAGGGAGT ATGTGAATGC CAGACACTGT
1681 TTGCCGTGCC ACCCTGAGTG TCAGCCCCAG AATGGCTCAG TGACATGTTT TGGACCGGAG
1741 GCTGACCAGT GTGTGGCCTG TGCCCACTAT AAGGACCTC CTTTCTGCGT GGCCCGCTGC
1801 CCCAGCGGTG TGAAACCTGA CCTCTCCTAC ATGCCATCT GGAAGTTTCC AGATGAGGAG
1861 GGCACGTGCC AGTCTTGCCC CATCAACTGC ACCCACTCCT GTGTGGACCT GGATGACAAG
1921 GGCTGCCCCG CCGAGCAGAG AGCCAGCCCT CTGACGTCCA TCATCTCTGC TGTGGTGGGC
1981 ATTCTGCTGG TCGTGGTCTT GGGGGTGGTC TTTGGAATCC TCATCAAGCG ACGGCAGCAG
2041 AAGATCCGGA AGTACACGAT GCGGAGGCTG CTGCAGGAAA CGGAGCTGGT GGAGCCACTG
2101 ACACCGAGTG GAGCGATGCC CAACCAAGCG CAGATGCGGA TCCTGAAAGA GACGGAGCTG
2161 AGGAAGGTGA AGGTGCTTGG ATCTGGAGCT TTTGGCACAG TCTACAAGGG CATCTGGATC
2221 CCTGATGGGG AGAATGTGAA AATTCCAGTG GCCATCAAAG TGTTGAGGGA AAACACATCC
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FIG. 1A

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2281 CCCAAAGCCA ACAAAGAAAT CTTAGACGAA GCATATGTGA TGGCTGGTGT GGGCTCCCCA  
2341 TATGTCTCCC GCCTCCTGGG CATCTGCCTG ACATCCACGG TGCAGCTGGT GACACAGCTT  
2401 ATGCCCTATG GCTGCCTCTT AGACCATGTC CGAGAAAACC GCGGACGCCT GGGCTCCCAG  
2461 GACCTGCTGA ACTGGTGTAT GCAGATTGCC AAGGGGATGA GCTACCTGGA GGATGTGCGG  
2521 CTCGTACACA GGGACTTGGC TGCTCGGAAC GTGCTGGTCA AGAGTCCCAA CCATGTCAAA  
2581 ATTACAGACT TTGGGCTGGC TCGGCTGCTG GACATTGACG AGACAGAGTA CCATGCAGAT  
2641 GGGGGCAAGG TGCCCATCAA GTGGATGGCG CTGGAGTCCA TTCTCCGACG GCGGTTTACC  
2701 CACCAGAGTG ATGTGTGGAG TTATGGTGTG ACTGTGTGGG AGCTGATGAC TTTTGGGGCC  
2761 AAACCTTACG ATGGGATCCC AGCCCGGGAG ATCCCTGACC TGCTGGAAAA GGGGGAGCGG  
2821 CTGCCCCAGC CCCCCATCTG CACCATTGAT GTCTACATGA TCATGGTCAA ATGTTGGATG  
2881 ATTGACTCTG AATGTCGGCC GAGATTCCGG GAGTTGGTGT CGGAATTCTC CCGCATGGCC  
2941 AGGGACCCCC AGCGCTTTGT GGTCATCCAG AATGAGGACT TGGGGCCAGC CAGTCCCTTG  
3001 GACAGCACCT TCTACCGCTC ACTGCTGGAG GACGATGACA TGGGGGACCT GGTGGATGCT  
3061 GAGGAGTATC TGGTACCCCA GCAGGGCTTC TTCTGTCCAG ACCCTGCCCC GGGCACTGGG  
3121 GGCATGGTCC ACCACAGGCA CCGCAGCTCA TCTACCAGGA GTGGCGGTGG GGACCTGACG  
3181 CTAGGGCTGG AGCCCTCTGA AGAGGAGGCC CCCAGGTCTC CACGGGCACC CTCCGAAGGG  
3241 ACTGGCTCTG ATGTATTTGA TGGTGACCTA GGAATGGGGG CAGCCAAGGG GCTGCAAAGC  
3301 CTCCCCGCAC ATGACCCCAG CCCTCTACAG CGGTACAGTG AGGACCCAC GGTACCCCTG  
3361 CTTTCTGAGA CTGACGGCTA CGTTGCCCCC CTGACCTGCA GTCCCCAGCC CGAATATGTG  
3421 AACCAGCCAG ATGTTGCGCC ACAGCCCCCT TCGCCCCAAG AGGGCCCTCT GTCTCCTGCC  
3481 CGACCTACTG GTGCCACTCT GGAAAGGCC AAGACTCTCT CCCAGGGAA GAATGGGGTT  
3541 GTCAAAGACG TTTTTCCTT TGGGGGTGCT GTGGAGAACC CCGAGTACTT GGCACCCCGG  
3601 GGAGGAGCTG CCCCTCAGCC CCACCTTCTT CCTGCCTTCA GCCCAGCCTT CGACAACCTC  
3661 TATTACTGGG ACCAGGACCC ATCAGAGCGG GGGGCTCCAC CTAGCACCTT CAAAGGGACA  
3721 CCTACGGCAG AGAACCAGAG GTACCTGGGT CTGGACGTGC CAGTGTGA (SEQ ID NO:1)

FIG.1B

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Predicted Amino Acid Sequence of First Rhesus  
Her2/Neu Protein (SEQ ID NO:2)

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1  MELAAWYRWG LLLALLPPGA AGTQVCTGTD MKLRLPASPE THLDMLRHLY QGCQVVQGNL
61  ELTYLPTNAS LSFLQDIQEV QGYVLIHNPQ VRQVPLQRLR IVRGTQLFED NYALAVLDNG
121 DLLNNTTPVT GASPGLREL QLRSLTEILK GGVLIQRNPNQ LCYQDTILWK DIFHKNNQLA
181 LTLIDTNRSR ACHPCSPVCK GSRCWGESSE DCQSLTRTVC AGGCARCKGP LPTDCCHEQC
241 AAGCTGPKHS DCLACLHFNH SGICELHCPA LVTYNTDTFE SMPNPEGRYT FGASCVTACP
301 YNYLSTDVGS CTLVCPLHNQ EVTAEDGTQR CEKCSKPCAR VCYGLGMEHL REVRAVTSAN
361 IQEFAGCKKI FGSLAFLPES FDGDPAASNTA PLQPEQLRVF ETLEEITGYL YISAWPDSL P
421 DLSVLQNLQV IRGRILHNGA YSLTLQGLGI SWLGLRSLRE LGSGLALIIH NTRLCFVHTV
481 PWDQLFRNPH QALLHTANRP EDECVGEGLA CHQLCARGHC WPGPGTQCVN CSQFLRGQEC
541 VEECRVLQGL PREYVNARHC LPCHPECQPQ NGSVTCFGPE ADQCVACAHY KDPPFCVARC
601 PSGVKPDLSY MPIWKFPDEE GTCQSCPIN C THSCVDLDDK GCPAEQRASP LTSIISAVVG
661 ILLVVVLGVV FGILIKRRQQ KIRKYTMRR L QETELVEPL TPGAMPNQA QMRILKETEL
721 RKVKVLGSGA FGTVYKGIWI PDGENVKIPV AIKVLRENTS PKANKEILDE AYVMAGVGSP
781 YVSRLLGICL TSTVQLVTQL MPYGCLLDHV RENRGRLGSQ DLLNWCMQIA KGMSYLEDVR
841 LVHRDLAARN VLVKSPNHVK ITDFGLARLL DIDETEHAD GGKVPIKWMA LESILRRRFT
901 HQSDVWSYGV TVWELMTFGA KPYDGIPARE IPDLLEKGER LPQPPICTID VYMIMVKCWM
961 IDSECRPRFR ELVSEFSRMA RDPQRFVVIQ NEDLGASPL DSTFYRSLLE DDDMGDLVDA
1021 EEYLVPQQGF FCPDPAPGTG GMVHHRHRSS STRSGGGDLT LGLEPSEEEA PRSPRAPSEG
1081 TGSDVFDGDL GMGAAKGLQS LPAHDPSP LQ RYSEDPTVPL PSETDGYVAP LTCSPQPEYV
1141 NQPDVRPQPP SPQEGPLSPA RPTGATLERP KTLSPGKNGV VKDVFAFGGA VENPEYLAPR
1201 GGAAPQPHLP PAFSPAFDNL YYWDQDP SER GAPPSTFKGT PTAENPEYLG LDVPV*
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FIG.2

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Oligonucleotide Primers Spanning Rhesus Her2/neu Gene

Forward	Sequence	Reverse	Sequence
(-30)-(-10)	AGCCATGGGGGAGGAGCCCA (SEQ ID NO:3)	96-79	CTTCATGCTGTGCGGT (SEQ ID NO:20)
(-22)-(-1)	GGCCGGAGCCGACAGTGGACCC (SEQ ID NO:21)	431-409	CTTCGAGCTGCAGCTCCGCGAG (SEQ ID NO:22)
1-25	ATGGAGCTGGCGGCTTGTGCGCT (SEQ ID NO:23)	812-787	AGGCTGGGCGCTGCAGCTCAGAT (SEQ ID NO:4)
79-96	AGCCGACAGACATGAG (SEQ ID NO:24)	1115-1086	CCAAAGATCTTCTTGCAGCC (SEQ ID NO:6)
409-431	CTGGCGGAGCTGCAGCTTGGAG (SEQ ID NO:5)	1370-1352	GAGCCAGCCGAGGAGC (SEQ ID NO:8)
787-812	ATCTGTGAGCTGCAGCTGCCAGCCCT (SEQ ID NO:7)	1583-1558	CAGTGGGTGGGCGCTGGAGCCGAGCA (SEQ ID NO:25)
1086-1115	GCTGCAGAGATCTTTGG (SEQ ID NO:9)	1895-1876	TGGGTGCAGTTGATGGGCA (SEQ ID NO:10)
1352-1370	GCTGGCTGGGCTGCCCTC (SEQ ID NO:27)	2183-2161	GATCCAGACATCTTCACTTCTT (SEQ ID NO:26)
1558-1583	TGCTGGGCTGCAGGCGCCAGCCAGTG (SEQ ID NO:12)	2222-2200	GCGATCCAGATGCCCTTGTAGAC (SEQ ID NO:28)
1876-1895	TGCCCATCAGTGCACCCA (SEQ ID NO:29)	2277-4753A-2239	TGTTGTTTCCCTCAGCAGCGGATGGCCACTGGAATTT (SEQ ID NO:15)
2161-2183	AGCAAGGTGAGGTGCTTGGATC (SEQ ID NO:31)	2378-2356	GTCGATGTCAGGAGATGCCAG (SEQ ID NO:30)
2200-2222	GCTACAGGCGCATCTGATCCC (SEQ ID NO:33)	2768-2743	TAAAGTTTGGGCGCCAAAGTCAATCAG (SEQ ID NO:32)
2239-4753A 2277	AAATTCGAGTGGCCATGCGCGTGTGAGGGAAGACACA (SEQ ID NO:16)	2798-2776	TCAGGGAATCCCGGCGCTGGAT (SEQ ID NO:13)
2356-2378	CTGGCATCTGCCTCACATCCAC (SEQ ID NO:17)	3410-3388	GCGTGGGCGCTGCAGTCAAGGG (SEQ ID NO:34)
2743-2768	CTGATGACTTTTGGGCGCCAAAGCTTA (SEQ ID NO:35)	SalI_3768-3746	GCGGTGAGCTTACATGGCAGCTCCAGACCCA (SEQ ID NO:19)
2776-2798	ATCCGAGCGCGGAGATCCCTGA (SEQ ID NO:37)	3791-3770	TTCGCGGACTTGGCTTCTGG (SEQ ID NO:36)
3388-3410 <sup>2</sup>	CCCTGACCTGCGAGCGCCGAGCC (SEQ ID NO:39)	3885-3869	TGGCAGGTTCCCTGGA (SEQ ID NO:38)
1621-1644	GTCGAGGAATGCCGAGTACTGCAG (SEQ ID NO:14)	4186-4145	GCTTCAGGAGAGCTCTGAA (SEQ ID NO:18)
PmeI_SnaI_RBS_1-16	CCAGTTTAACATTAAATGCCCGCCACCATGAGCTGCCGCGCT (SEQ ID NO:11)		

FIG.3

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RT-PCR Primers and Clones Used to Construct Full-Length rhHER2/neu Clone.

Rxn.#	Oligonucleotide Primer		Clone
	Forward	Reverse	
1	AGCCATGGGCGGAGCGCA (SEQ ID NO:3)	AGGCTGGGAGTGCAGCTCACAGAT (SEQ ID NO:4)	#1_BS_(-30)-812.A1
2	CTGCGGAGCTGCAGCTTCGAG (SEQ ID NO:5)	CCAAAGATCTTCTTGCAGCC (SEQ ID NO:6)	#1_CR_409_1115.2
3	ATCTGTGAGCTGCAGTGGCCAGCCCT (SEQ ID NO:7)	GAGCGCAGCCCGCAGCCAGC (SEQ ID NO:8)	#1_CR_787_1370.10
4	GCCTGCAAGAGATCTTTGG (SEQ ID NO:9)	TGGGTGCAGTTGATGGGGCA (SEQ ID NO:10)	#1_BS_1096_1895.11
5	CCAGTTTAAACATTTAAATGCGCGCACCATGGAGCTGGCGCCT (SEQ ID NO:11)	TGGGTGCAGTTGATGGGGCA (SEQ ID NO:10)	#1_CR_1-1895.7(-)
6	TGCTGGGTCCAGGGCCACCCAGTG (SEQ ID NO:12)	TCAGGGATCTCCCGGCTGGGAT (SEQ ID NO:13)	Not Cloned (1558-2798)
7	GTGGAGGAATGCCGAGTACTGCAG (SEQ ID NO:14)	TGTGTTTCCCTCAACACGCGGATGCCACTGGAAATTT (SEQ ID NO:15)	#1_CR_1621-2277.2
8	AAATTCAGTGGCCATCGCCGTGTTGAGGGAAAACAC A (SEQ ID NO:16)	TCAGGGATCTCCCGGCTGGGAT (SEQ ID NO:13)	#1_CR_2239-2798.4
9	CTGGGCATCTGCCTGACATCCAC (SEQ ID NO:17)	GGTTTCAGGACAGCTCTGAA (SEQ ID NO:18)	#1_CR_2356-4166.2
10	GTGAGGAATGCCGAGTACTGCAG (SEQ ID NO:14)	GCGTCCACTTTACATGGACAGTCCAGACCCA (SEQ ID NO:19)	#1_CR_1621-3768.8(+)
10	GTGAGGAATGCCGAGTACTGCAG (SEQ ID NO:14)	GCGTCCACTTTACATGGACAGTCCAGACCCA (SEQ ID NO:19)	#1_CR_1621-3768.12(+)

FIG.4

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## Nucleotide Sequence of Second Rhesus HER2/Neu

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1 ATGGAGCTGG CGGCCTGGTA CCGCTGGGGG CTCCTCCTCG CCCTCTTGCC CCCC GGAGCT
61 GCGGGCACCC AAGTGTGCAC CGGCACAGAC ATGAAGCTGC GGCTCCCTGC CAGTCCCGAG
121 ACCCACCTGG ACATGCTCCG CCACCTCTAC CAGGGCTGCC AGGTGGTGCA GGGTAACCTG
181 GAACTCACCT ACCTGCCCAC CAATGCCAGC CTCTCCTTCC TGCAGGATAT CCAGGAGGTG
241 CAGGGCTACG TGCTCATCGC TCACAACCAA GTGAGGCAGG TCCCACTGCA GAGGCTGCGG
301 ATTGTGCGAG GCACCCAGCT CTTTGAGGAC AACTATGCCC TGGCCGTGCT AGACAATGGA
361 GACCCGCTGA ACAATACCAC CCCTGTCACA GGGGCCTCCC CAGGAGGCCT GCGGGAGCTG
421 CAGCTTCGAA GCCTCACAGA GATCTTGAAA GGAGGGGTCT TGATCCAGCG GAACCCCGAG
481 CTCTGCTACC AGGACACGAT TTTGTGGAAG GACATCTTCC ATAAGAACAA CCAGCTGGCT
541 CTCACACTGA TCGACACCAA CCGCTCTCGG GCCTGCCACC CCTGTTCTCC AGTGTGTAAG
601 GGCTCCCGCT GCTGGGGAGA GAGTTCTGAG GATTGTCAGA GCCTGACGCG CACTGTCTGT
661 GCCGGTGGCT GTGCCCGCTG CAAGGGGGCCA CTGCCCACTG ACTGCTGCCA TGAGCAGTGT
721 GCTGCCGGCT GCACGGGGCCC CAAGCACTCT GACTGCCTGG CCTGCCTCCA CTTCAACCAC
781 AGCGGCATCT GTGARCTGCA CTGCCAGCC CTGGTCACCT ACAACACAGA CACCTTTGAG
841 TCCATGCCCA ACCCCGAGGG CCGGTATACA TTCGGCGCCA GCTGTGTGAC TGCCTGTCCC
901 TACAACCTACC TTTCTACGGA CGTGGGATCC TGCACCCTCG TCTGCCCCCT GCACAACCAA
961 GAGGTGACAG CGGAGGACGG AACACAGCGA TGTGAGAAGT GCAGCAAGCC CTGTGCCCGA
1021 GTGTGCTATG GTCTGGGCAT GGAGCACTTG CGAGAGGTGA GGGCGGTAC CAGTGCCAAT
1081 ATCCAGGAGT TTGCTGGCTG CAAGAAGATC TTTGGGAGYT TGGCATTCTT GCCAGAGAGC
1141 TTTGATGGCG ACCCAGCCTC CAACACCGCC CCGCTTCAGC CGGAGCAGCT CCGAGTGTTC
1201 GAGACTCTGG AAGAGATCAC AGGTTACCTA TACATCTCAG CATGGCCAGA CAGCCTGCCT
1261 GACCTTAGCG TCCTCCAGAA CCTGCAAGTA ATCCGGGGAC GAATTCTGCA CAATGGCGCC
1321 TACTCACTGA CCCTGCAAGG GCTGGGCATC AGCTGGCTGG GGCTGCGCTC GCTGAGGGAA
1381 CTGGGCAGTG GACTGGCCCT CATCCACCAT AACACCCGCC TCTGCTTTGT GCACACGGTG
1441 CCCTGGGACC AGCTCTTCCG GAACCCGCAC CAAGCCCTGC TCCCACTGC CAACCGGCCA
1501 GAGGACGAGT GTGTGGGCGA GGGCCTGGCC TGCCACCAGC TGTGCGCCCR AGGGCACTGC
1561 TGGGGTCCAG GGCCACCCA GTGTGTCAAC TGCAGCCAGT TCCTTCGGGG CCAGGAGTGC
1621 GTGGAGGAAT GCCGAGTACT GCAGGGGCTC CCCAGGGAGT ATGTGAATGC CAGACACTGT
1681 TTGCCGTGCC ACCCTGAGTG TCAGCCCCAG AATGGCTCAG TGACATGTTT TGGACCGGAG
1741 GCTGACCAGT GTGTGGCCTG TGCCCACTAT AAGGACCCTC CCTTCTGCGT GGCCCGCTGC
1801 CCCAGCGGTG TGAAACCTGA CCTCTCCTAC ATGCCATCT GGAAGTTTCC AGATGAGGAG
1861 GGCACGTGCC AGCCTTGCCC CATCAACTGC ACCCACTCCT GTGTGGACCT GGATGACAAG
1921 GGCTGCCCCG CCGAGCAGAR AGCCAGCCCT CTGACGTCCA TCATCTCTGC TGTGGTGGGC
1981 ATTCTGCTGG TCGTGGTCTT GGGGGTGGTC TTTGGAATCC TCATCAAGCG ACGGCAGCAG
2041 AAGATCCGGA AGTACACGAT GCGGAGGCTG CTGCAGGAAA CGGAGCTGGT GGAGCCACTG
2101 ACACCGAGTG GAGCGATGCC CAACGAGGCG CAGATGCGGA TCCTGAAAGA GACGGAGCTG
2161 AGGAAGGTGA AGGTGCTTGG ATCTGGAGCT TTTGGCACAG TCTACAAGGG CATCTGGATC
2221 CCTGATGGGG AGAATGTGAA AATTCCAGTG GCCATCAAAG TGTTGAGGGA AAACACATCC

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FIG. 5A

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2281 CCCAAAGCCA ACAAAGAAAT CTTAGACGAA GCATATGTGA TGGCTGGTGT GGGCTCCCCA  
2341 TATGTCTCCC GCCTCCTGGG CATCTGCCTG ACATCCACGG TGCAGCTGGT GACACAGCTT  
2401 ATGCCCTATG GCTGCCTCTT AGACCATGTC CGAGAAAACC GCGGACGCCT GGGCTCCCAG  
2461 GACCTGCTGA ACTGGTGTAT GCAGATTGCC AAGGGGATGA GCTACCTGGA GGATGTGCGG  
2522 CTCGTACACA GGGACTTGGC TGCTCGGAAC GTGCTGGTCA AGAGTCCCAA CCATGTCAAA  
2581 ATTACAGACT TTGGGCTGGC TCGGCTGCTG GACATTGACG AGACAGAGTA CCATGCAGAT  
2641 GGGGGCAAGG TGCCCATCAA GTGGATGGCG CTGGAGTCCA TTCTCCGACG GCGGTTACC  
2701 CACCAGAGTG ATGTGTGGAG TTATGGTGTG ACTGTGTGGG AGCTGATGAC TTTTGGGGCC  
2761 AAACCTTACG ATGGGATCCC AGCCCGGGAG ATCCCTGACC TGCTGGAAAA GGGGGAGCGG  
2821 CTGCCCCAGC CCCCCATCTG CACCATTGAT GTCTACATGA TCATGGTCAA ATGTTGGATG  
2881 ATTGACTCTG AATGTCGGCC GAGATTCCGG GAGTTGGTGT CGGAATTCTC CCGCATGGCC  
2941 AGGGACCCCC AGCGCTTTGT GGTCATCCAG AATGAGGACT TGGGCCCAGC CAGTCCCTTG  
3001 GACAGCACCT TCTACCGCTC ACTGCTGGAG GACGATGACA TGGGGGACCT GGTGGATGCT  
3061 GAGGAGTATC TGGTACCCCA GCAGGGCTTC TTCTGTCCAG ACCCTGCCCC GGGCACTGGG  
3121 GGCATGGTCC ACCACAGGCA CCGCAGCTCA TCTACCAGGA GTGGCGGTGG GGACCTGACG  
3181 CTAGGGCTGG AGCCCTCTGA AGAGGAGGCC CCCAGGTCTC CACRGGCACC CTCCGAAGGG  
3241 ACTGGCTCTG ATGTATTTGA TGGTGACCTA GGAATGGGGG CAGCCAAGGG GCTGCAAAGC  
3301 CTCCCCGCAC ATGACCCAG CCCTCTACAG CGGTACAGTG AGGACCCAC GGTACCCCTG  
3361 CTTTCTGAGA CTGACGGCTA CGTTGCCCCC CTGACCTGCA GYCCCCAGCC CGAATATGTG  
3421 AACCAGCCAG ATGTTTCGGC ACAGCCCCCT TCGCCCCAAG AGGGCCCTCT GTCTCCTGCC  
3481 CGACCTACTG GTGCCACTCT GGAAAGGCC AAGACTCTCT CCCCAGGGAA GAATGGGGTT  
3541 GTCAAAGACG TTTTTCCTT TGGGGGTGCT GTGGAGAACC CCGAGTACTT GGCACCCCGG  
3601 GGAGGAGCTG CCCCTCAGCC CCACCTTCCT CCTGCCTTCA GCCCAGCCTT CGACAACCTC  
3661 TATTACTGGG ACCAGGACCC ATCAGAGCGG GGGGCTCCAC CTAGCACCTT CAAAGGGACA  
3721 CCTACGGCAG AGAACCAGA GTACCTGGGT CTGGACGTGC CAGTGTGA (SEQ ID NO:40)

FIG.5B

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## Predicted Amino Acid Sequence of Second Rhesus Her2/Neu Protein

```
1  MELAAWYRWG LLLALLPPGA AGTQVCTGTD MKLRLPASPE THLDMLRHLY QGCQVVQGNL
61  ELTYLPTNAS LSFLQDIQEV QGYVLIAHNQ VRQVPLQRLR IVRGTLQFED NYALAVLDNG
121 DPLNNTTPVT GASPGLREL QLRSLTEILK GGVLIQRNPQ LCYQDTILWK DIFHKNNQLA
181 LTLIDTNRSR ACHPCSPVCK GSRCWGESSE DCQSLTRTVC AGGCARCKGP LPTDCCHEQC
241 AAGCTGPKHS DCLACLFHNH SGICELHCPA LVTYNTDTFE SMPNPEGRYT FGASCVTACP
301 YNYLSTDVGS CTLVCPLHNQ EVTAEDGTQR CEKCSKPCAR VCYGLGMEHL REVRVTSAN
361 IQEFAGCKKI FGSLAFLPES FDGDPASNTA PLQPEQLRVF ETLEEITGYL YISAWPDSLP
421 DLSVLQNLQV IRGRILHNGA YSLTLQGLGI SWLGLRSLRE LGSGLALIH NTRLCFVHTV
481 PWDQLFRNPH QALLHTANRP EDECVGEGLA CHQLCAXGHC WGPQPTQCVN CSQFLRGQEC
541 VEECRVLQGL PREYVNARHC LPCHPECQPQ NGSVTCFGPE ADQCVACAHY KDPPFCVARC
601 PSGVKPDLSY MPIWKFPDEE GTCQPCPINC THSCVDLDDK GCPAEQXASP LTSIISAVVG
661 ILLVVVLGVV FGILIKRRQQ KIRKYTMRR LQETELVEPL TPGAMPNQA QMRILKETEL
721 RKVKVLGSGA FGTVYKGIWI PDGENVKIPV AIKVLRENTS PKANKEILDE AYVMAGVGSP
781 YVSRLLGICL TSTVQLVTQL MPYGCLLDHV RENRGRLGSQ DLLNWCMQIA KGMSYLEDVR
841 LVHRDLAARN VLVKSPNHVK ITDFGLARLL DIDETEHAD GGKVPIKWMA LESILRRRFT
901 HQSDVWSYGV TVWELMTFGA KPYDGIPARE IPDLLEKGER LPQPPICTID VYMIMVKCWM
961 IDSECRPRFR ELVSEFSRMA RDPQRFVVIQ NEDLGPASPL DSTFYRSLLE DDDMGDLVDA
1021 EEYLVPQQGF FCPDPAPGTG GMVHHRHRSS STRSGGGDLT LGLEPSEEEA PRSPXAPSEG
1081 TGSDVFDGDL GMGAAKGLQS LPAHDPSPQL RYSEDPTVPL PSETDGYVAP LTCSPQPEYV
1141 NQPDVRPQPP SPQEGPLSPA RPTGATLERP KTLSPGKNGV VKDVFAFGGA VENPEYLAPR
1201 GGAAPQPHLP PAFSPAFDNL YYWDQDP SER GAPPSTFKGT PTAENPEYLG LDVPV*
(SEQ ID NO:41)
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FIG.6



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## MUTATIONS IN RHESUS HER2/neu NUCLEOTIDE SEQUENCE

POSITION	RhHER2#1		POSITION	RhHER2#2	
365	2 CLONES	C T G L	365	2 CLONES	C C G P
795	3 CLONES	G A G E	795	1 CLONE	G A G E
	2 CLONES	G A A E		2 CLONES	G A A E
1119	2 CLONES	A G C S	1119	3 CLONES	A G T S
				2 CLONES	A G C S
1550	3 CLONES	C G A R	1550	2 CLONES	C A A Q
				3 CLONES	C G A R
1873	6 CLONES	T C T S	1873	11 CLONES	C C T P
1940	2 CLONES	A G A R	1940	3 CLONES	A A A K
				3 CLONES	A G A R
3224	4 CLONES	C G G R	3224	5 CLONES	C G G R
				3 CLONES	C A G Q
3402	2 CLONES	A G T S	3402	2 CLONES	A G C S
				6 CLONES	A G T S

FIG.7